

IUBMB Enzyme Nomenclature

EC 3.2.1.45

Accepted name: glucosylceramidase

Reaction: D-glucosyl-*N*-acylsphingosine + H₂O = D-glucose + *N*-acylsphingosine

Other name(s): psychosine hydrolase; glucosphingosine glucosylhydrolase; GlcCer- β -glucosidase; β -D-glucocerebrosidase; glucosylcerebrosidase; β -glucosylceramidase; ceramide glucosidase; glucocerebrosidase; glucosylsphingosine β -glucosidase; glucosylsphingosine β -D-glucosidase

Systematic name: D-glucosyl-*N*-acylsphingosine glucohydrolase

Comments: Also acts on glucosylsphingosine (*cf.* [EC 3.2.1.62](#) glycosylceramidase).

Links to other databases: [BRENDA](#), [EXPASY](#), [KEGG](#), [ERGO](#), [PDB](#), CAS registry number: 37228-64-1

References:

1. Brady, R.O., Kanfer, J.N. and Shapiro, D. The metabolism of glucocerebrosides. I. Preparation and properties of a glucocerebroside-cleaving enzyme from spleen tissue. *J. Biol. Chem.* 240 (1966) 39-43.
2. Vaccaro, A.M., Muscillo, M. and Suzuki, K. Characterization of human glucosylsphingosine glucosyl hydrolase and comparison with glucosylceramidase. *Eur. J. Biochem.* 146 (1985) 315-321. [PMID: [3967661](#)]

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